205.4 Radioactive Solutions

These SRMs are intended for the calibration of radioactivity measuring instruments and for the monitoring of chemical and geochemical processes. They are calibrated in terms of activity per gram of solution. Each SRM is contained in a flame-sealed glass ampoule or bottle and, except as noted, consists of the radionuclide dissolved in an aqueous solution (usually acidic). Click here for more information.

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PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	Radionuclide	Decay Modes	Massic Activity (Bq/g)	Time of Calibration (month/year)	Volume of Solution (mL)
4322B*	Americium-241	α	40	09/91	5
4332D*	Americium-243	α	40	05/95	5
4251C*	Barium-133	EC	487600	09/93	5
4222C	Carbon-14 (as hexadecane)	β^-	50 000	09/90	5
4233E*	Cesium-137	β^-,γ	300 000	9/05	5
4943	Chlorine-36	β^-	10 000	12/84	3
4915F*	Cobalt-60	β^-,γ	60 000	11/05	5
4329*	Curium-243	α	70	06/84	5
4320A*	Curium-244	α	35	02/96	5
4370C*	Europium-152	β^-, EC, γ	90 000	02/87	5
4361C	Hydrogen-3 (as water)	β^-	2	09/98	500
4926E	Hydrogen-3 (as water)	β^-	5 000	09/98	20
4929F	Iron-55	EC, β^-	59000	11/05	5
4927F	Hydrogen-3 (as water)	β^-	635 000	09/98	5

4947C	Hydrogen-3 (as toluene)	β^-	300 000	03/87	4
4949C*	Iodine-129	β^-	3 451	03/93	5
4341*	Neptunium-237	α	100	03/94	5
4226C	Nickel-63	β^-	47 100	08/95	5
4323B*	Plutonium-238	α	40	11/99	5
4330B*	Plutonium-239	α	40	11/99	5
4338A*	Plutonium-240	α	40.88	05/96	5
4340A*	Plutonium-241	β^-	250	12/95	5
4334H*	Plutonium-242	α	25	06/94	5
4326	Polonium-209	α, EC	85.42	03/94	5
4952C	Radium-226 Blank	–	0.000 2	08/91	5
4969	Radium-226	α, γ	3	09/98	5
4965	Radium-226	α, γ	30	09/91	5
4966	Radium-226	α, γ	270	09/91	5
4967A	Radium-226	α, γ	2 500	09/03	5
4339A	Radium-228	α, EC	200	In Prep	5
4919H*	Strontium-90	–	4 000	07/95	5
4288A	Technetium-99	β^-	30 000	09/96	5
4328B	Thorium-229	α	30	07/96	5
4342	Thorium-230	α	50	06/93	5
4324B	Uranium-232	α	30	07/02	5
4321C	Uranium-238 "natural uranium"	α	250	01/92	5
4276C*	Long-Lived Mixed Radionuclide:			09/88	5
	Antimony-125	β^-, γ	12 000		
	Europium-154	β^-, γ	16 000		

Europium-155	β^-, γ	6 000

* License certification is required of purchaser by NIST before shipment.